



## **Idiopathic Mastoid Fistula Causing Aural Fullness and Objective Tinnitus**

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### Introduction:

Idiopathic mastoid fistulization secondary to mastoid cortical dehiscence is a rare process, not previously described, that presents with head and neck manifestations. Similarly rare cases have involved other skull base surfaces in the context of pathologic hyperpneumatization. We present an exemplary case of careful physical examination and imaging review that revealed a surgically treatable cause of objective tinnitus

### Methods:

Single patient case description and literature review.

### Results:

Mastoidectomy was curative.

### Conclusions:

To the best of our knowledge, this is the first case of idiopathic mastoid cortical fistulization causing objective tinnitus and aural fullness. Idiopathic mastoid fistula formation has been described in the setting of mastoid hyper-pneumatization, a rare process. In cases of temporal bone hyper-pneumatization, extensive air cell tracts develop and involve adjacent cranial bones, typically the occipital and sphenoid. Hyper-pneumatization is often asymptomatic, however, some cases present with neck pain, subjective tinnitus, and mass effect symptoms. Our observations and data substantiate the hypothesis that mastoid cortical fistulae can be idiopathic and cause symptoms. One may also deduce that a fistula's narrow caliber results in valvular function producing symptoms and signs. In such cases, a thorough physical examination may reveal reproducible, objective tinnitus. Imaging confirms the diagnosis if the mastoid cortex is dehiscent and air is present within cervical soft tissues. . In case of a cortical fistula or dehiscence, mastoidectomy should completely eliminate the symptoms. The surgeon may also consider a limited mastoid operation or resurfacing procedure for select cases.